

ADDENDUM TO THE FACT SHEET  
FOR STATE WASTE DISCHARGE  
PERMIT NO. ST 5278

I. GENERAL INFORMATION

Facility: Water Reclamation and Reuse Facility  
City of Quincy  
Post Office Box 338  
Quincy, WA 98848

II. APPLICATION REVIEW

An application for permit reissuance was submitted to the Department of Ecology (Department) on January 30, 2006, and accepted by the Department on February 01, 2006. The scope and manner of any review of an application for replacement of permit by the Department shall be sufficiently detailed as to insure the following:

- That the permittee is in substantial compliance with all of the terms, conditions, requirements and schedules of compliance of the expired permit;
- That the Department has up-to date information on the permittee's production levels; permittee's waste treatment practices; nature, content, and frequencies of permittee's discharge; either pursuant to the submission of new forms and applications or pursuant to monitoring records and reports resubmitted to the Department by the permittee; and
- That the discharge is consistent with applicable effluent standards and limitations, water quality standards, and other legally applicable requirements listed in WAC 173-220-130.

The application for the City of Quincy was reviewed and indicates that no changes in the treatment characteristics of the effluent process or volume of wastewater have occurred.

III. PERMIT REAUTHORIZATION

This fact sheet addendum accompanies the draft permit, which is to be reauthorized to City of Quincy for the discharge of wastewater to protect and augment ground water supply. The previous fact sheet is also part of this administrative record and explains the basis for the discharge limitations and conditions of the reauthorized permit.

The existing permit requirements, including discharge limitations and monitoring, do not need to be changed to protect the receiving water quality. The previous fact sheet addressed conditions and issues at the facility at the time when the previous permit was issued, and statements made reflected the status in 2001. Since the issuance of the current permit, the Department has not received any information which indicates that environmental impacts from the discharge that were not evaluated at the time of the last permit issuance is persuasive enough to undertake a complete renewal of the permit. The reauthorized permit is virtually identical to the previous permit issued on May 24, 2001.

The discharge limits and conditions in effect at the time of expiration of the previous permit are carried over unchanged to this reauthorized permit. Assessment of compliance and inspections of the facility during the previous permit term indicate that the facility should not be placed on a high priority for permit renewal. The Department assigns a high priority for permit renewals in situations where water quality would materially benefit from a more stringent permit during the next five-year cycle.

The permit reauthorization process, in concert with the routine renewal of high priority permits, allows the Department to reissue permits in a timely manner and minimize the number of active permits that have passed expiration dates. A system of ranking the relative significance of the environmental benefit to be gained by renewing a permit rather than reauthorizing a permit is followed during the Department's annual permit planning process. Each permit that is due for reissuance is assessed and compared with other permits that are also due for reissuance. The public is notified and input is sought after the initial draft ranking has tentatively established which permits are likely to be completely renewed and which are likely to be reauthorized. All relevant comments and suggestions are considered before a final decision is made regarding the type of reissuance for each permit.

Submittal requirements from the previous permit that were completed and submitted and do not require additional or continued assessment were removed from this permit. The submittal dates for the other standard compliance and submittal requirements that have been carried over from the past permit into this reauthorized permit have been adjusted to the proposed permit schedule. The Department considered these submittals necessary in the previous permit and no information has come forward to cause a reconsideration of the submittal requirement. The recently updated permit shell for water reclamation and reuse was incorporated in this permit reauthorization.

The permit will be issued in the final revised Water Reuse permit shell to be consistent with Water Reuse permits issued statewide. The only changes to the previous permit are the influent and effluent monitoring schedule for arsenic and the inclusion of Department of Health's monitoring requirements for drinking water pollutant Maximum Contaminant Levels (MCLs). The discharge monitoring data submitted verifies that the arsenic concentrations in the effluent are consistently below drinking water standards (10 µg/l) and concentrations in the ground water up-gradient of the infiltration basins. However, the effluent levels are above Ground Water Standards (0.05 µg/l). See Appendix B for the March 1993 Department of Ecology issued report on the Quincy Agricultural Chemicals Ground Water Quality.

- The monitoring schedule for arsenic required in Special Condition S2.A Influent Monitoring and S2.B Class A Reclaimed Water Monitoring was reduced to once per quarter.

Health is concerned about public health protection when Class A Reclaimed Water is infiltrated into potential sources of drinking water. Therefore, the Department of Health has required that the following 26 additional MCL contaminants not include in Ecology's priority pollutant scans list be sampled:

**Table of Drinking Water MCLs Contaminants**

<b>Pollutant and CAS number</b>	<b>Analytical Protocol (EPA Part 136)</b>	<b>Detection or Quantitation Level (µg/l)</b>
Styrene	524.2	0.06
Xylenes	524.2	0.06
Dichloromethane	524.2	0.06
Dibromochloropropane [DBCP]	504.1	0.01
Ethylene Dibromide [EDB]	504.1	0.01
Glyphosate [Roundup]	547 <sup>(a)</sup>	6.0
Oxamyl	531.1	0.86
Picloram	531.1	0.86
Aldicarb	531.1	0.86
Aldicarb sulfoxide	531.1	0.86
Aldicarb sulfone	531.1	0.86
Carbofuran	531.1	0.86
Simazine	525.2	0.15
Alachlor	525.2	0.15
Atrazine	525.2	0.15
Chlorodane	525.2	0.15
Di (2-ethylhexyl) adimpate	525.2	0.15
2,4-D	515.3	0.35
Silvex	515.3	0.35
Dalpon	515.3	0.35
Dinoseb	515.3	0.35
Endothall	548 <sup>(a)</sup>	0.7
Diquat	549.2 <sup>(a)</sup>	0.72
Radionuclides [Gross Alpha & Beta]	(MM100)	N/A
HAA's 5	(552.1) <sup>(b)</sup>	N/A
Bromate	(321.8) <sup>(c)</sup>	0.3
<sup>(a)</sup> State Waiver – Department of Health, Office of Drinking Water, WQMR		
<sup>(b)</sup> Non-chlorine disinfection-request waiver - Department of Health, Office of Drinking Water		
<sup>(c)</sup> Non-ozone disinfection- request waiver - Department of Health, Office of Drinking water		

Minor permit monitoring schedules include the reporting of TKN in the ground water and the addition of Nitrite to Nitrate (NO<sub>3</sub> + NO<sub>2</sub>). The accuracies in the calculation for Total Nitrogen require these two parameters (reference to footnote b in Ground Water Monitoring Table).

Public Notice of Application was published on August 17 and August 24, 2006 in the Quincy Valley Post-Register.

#### IV. RECOMMENDATION FOR PERMIT ISSUANCE

The Department proposes that this permit be issued for five years.

## **APPENDIX A – PUBLIC INVOLVEMENT INFORMATION**

The Department has determined to reauthorize a discharge permit to the applicant listed on page 1 of this fact sheet addendum. The permit contains conditions and effluent limitations that are described in the fact sheet.

Public notice of application was published on August 17, and August 24, 2006, in *the Quincy Valley Post-Register* to inform the public that an application had been submitted and to invite comment on the reauthorization of this permit.

Water Quality Permit Coordinator  
Department of Ecology  
4601 North Monroe Street  
Spokane, WA 99205-1295

Further information may be obtained from the Department by telephone at (509) 329-3537 or by writing to the address listed above.

## APPENDIX B – Quincy Agricultural Chemicals Ground Water Quality Assessment

Arsenic is a naturally occurring element in rocks, soils, and the waters in contact with them. Recognized as a toxic element for centuries, arsenic today also is a human health concern because it can contribute to skin, bladder, and other cancers (National Research Council, 1999). Recently, the National Research Council (1999) recommended lowering the current maximum contaminant level (MCL) allowed for arsenic in drinking water of 50 µg/L (micrograms per liter), citing risks for developing bladder and other cancers. The U.S. Environmental Protection Agency (USEPA) will propose a new, and likely lower, arsenic MCL during 2000 (U.S. Environmental Protection Agency, 2000). This fact sheet provides information on where and to what extent natural concentrations of arsenic in ground water exceed possible new standards.

In March 1993, the Department of Ecology issued a report on the Quincy Agricultural Chemicals Ground Water Quality Assessment (Publication Number 93-e35). The Department sampled twenty-seven wells and two field drains for agricultural pesticides. The study covered roughly 30 square miles including most of Township 20N Range 24W and the northern sections of Township 19N. Based on the elevation and water levels of the study wells, the ground water gradient across the study area is from the northwest to the east-southeast.

Arsenic was detected in each of the six wells sampled at concentrations ranging from an estimated 1.7 µg/L to 7.9 µg/L, with a mean of 5.7 µg/L. All arsenic concentrations exceeded the ground water quality standard for Washington (WAC 173-200). The 5.7 µg/L average concentration was 100 times the 0.05 µg/L ground water standards. However, concentrations were 10 times lower than the interim preliminary EPA drinking water standards of 50 µg/L maximum contaminant level (MCL). However, EPA has set the final arsenic standard for drinking water at 10 parts per billion (10 µg/L) to protect consumers served by public water systems from the effects of long-term, chronic exposure to arsenic. Water systems must comply with this standard by January 23, 2006, providing additional protection to an estimated 13 million Americans. Therefore, the 5.7 µg/L average concentration will only be 2 times lower than the final arsenic MCL limit.

### ARSENIC (all data = ug/L)

	WWTP		Ground Water Monitoring Wells					
	Influent	Effluent	W-01	W-54	W-60	W-26	WS-1	WS-2
Jan-03	2.0	2.0	8.0	17.1	17.6	20.5	9.9	24.9
Feb-03	2.6	2.0	8.5	19.0	18.9	25.9	10.5	30.2
Mar-03	2.0	2.0	8.1	17.6	15.9	25.0	9.1	25.3
Apr-03	3.4	2.1	8.7	17.3	22.8	7.5	17.6	24.2
May-03	3.6	2.6	8.1	17.5	20.7	15.3	9.7	27.8
Jun-03	3.4	2.9	8.9	17.5	16.7	19.3	10.3	25.2
Jul-03	3.6	2.0	8.8	22.5	22.2	16.6	11.0	30.0
Aug-03	4.2	3.1	8.2	22.0	18.3	19.3	11.5	24.6

**ARSENIC (all data = ug/L)**

	<b>WWTP</b>		<b>Ground Water Monitoring Wells</b>					
	Influent	Effluent	W-01	W-54	W-60	W-26	WS-1	WS-2
Sep-03	4.4	3.3	7.8	17.8	15.4	19.9	9.9	22.4
Oct-03	4.6	3.4	8.4	18.3	13.6	19.0	10.4	26.6
Nov-03	2.9	2.8	10.2	19.4	15.4	25.0	12.6	35.6
Dec-03	2.0	2.0	8.2	17.8	16.4	17.4	10.9	27.0
Jan-04	2.0	2.0	9.1	19.2	18.4	26.2	11.2	23.9
Feb-04	2.3	2.2	11.5	23.3	24.2	28.4	14.3	30.6
Mar-04	2.0	2.0	8.5	18.8	17.4	26.7	24.5	10.2
Apr-04	2.2	2.0	8.3	16.2	17.7	22.3	9.3	24.1
May-04	2.6	2.0	8.2	17.7	20.1	15.6	10.5	23.7
Jun-04	2.9	2.9	9.2	20.3	18.5	18.3	11.3	24.9
Jul-04	3.9	3.3	9.1	17.3	19.0	18.1	11.2	26.3
Aug-04	3.7	2.3	7.5	15.9	17.3	14.6	9.3	25.7
Sep-04	3.3	2.5	9.5	19.1	12.3	20.7	11.7	28.7
Oct-04	5.0	3.2	9.4	19.0	14.3	19.7	28.5	10.2
Nov-04	5.3	3.7	9.2	17.6	15.2	23.0	30.8	12.3
Dec-04	2.4	2.0	8.8	17.5	17.3	22.0	12.8	28.4
Jan-05	2.6	2.0	9.1	16.8	17.1	20.8	10.3	19.1
Feb-05	2.0	2.0	8.5	20.3	19.3	25.8	20.2	10.4
Mar-05	2.0	2.0	8.5	19.2	19.9	26.2	10.2	20.1
Apr-05	3.3	2.2	8.9	19.5	22.2	30.3	20.6	11.2
May-05	3.7	2.3	9.5	21.6	22.9	20.4	21.8	11.4
Jun-05	4.1	3.1	8.1	20.0	18.0	12.7	17.5	9.8
Jul-05	3.1	2.9	9.0	18.8	21.4	23.0	11.9	24.1
Aug-05	4.8	2.3	8.0	16.8	16.0	17.3	22.0	10.6
Sep-05	4.2	3.5	7.4	18.1	16.3	18.0	26.4	10.2
Oct-05	3.8	2.9	8.2	18.2	16.7	11.2	21.6	27.8
Nov-05	2.7	2.1	9.5	18.3	15.4	25.4	24.0	10.9
Dec-05	2.4	2.0	8.8	17.5	17.3	22.0	12.8	28.4

Maximum	5.3	3.7	11.5	23.3	24.2	30.3	30.8	35.6
Minimum	2.0	2.0	7.4	15.9	12.3	7.5	9.1	9.8
95th%ile =	4.9	3.4	9.7	22.2	22.8	27.3	27.1	30.3

In 2001, the City of Quincy constructed a class A Water Reclamation and Reuse facility that utilized the existing storage basins to recharge the local upper aquifer. The above table shows that the arsenic concentrations in the effluent from the Reuse treatment facility is approximately 3.1 to 9.6 times lower then the arsenic concentrations in the

ground water and 2.7 to 5.0 times lower than the final drinking water standards (10 µg/L).

A regulatory mechanism to deal with the issues associated with natural background concentrations of arsenic in groundwater-derived drinking waters is currently lacking. Since the effluent is lower than both the drinking water standards and Ecology's Ground Water Standards for arsenic, there will be no effluent limits established for arsenic (Total) in the permit. However, the effluent and ground water will continue to be monitored for arsenic (total) on a reduced basis.